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Item 3 (b) of the provisional agenda*
Items for discussion and decision: agricultural statistics

Friends of the Chair on Agricultural Statistics

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its fortieth session (see E/2009/24 (Supp.), chap. I.B), the Secretary-General has the honour to transmit the report of the Friends of the Chair on Agricultural Statistics. The report presents the Global Strategy to Improve Agricultural and Rural Statistics based on the ideas formulated in the strategic plan to improve national and international agricultural and rural statistics as approved by the Statistical Commission at its fortieth session (E/CN.3/2009/3).

During 2009, the Global Strategy was developed and subsequently discussed at a large number of important meetings with many stakeholders, policymakers, statistical institutes and researchers at the national and international levels. As a result, countries and international organizations have made very broad-based commitments to the scope and content of the Global Strategy.

The Commission is requested to comment on the report and the Global Strategy, endorse the implementation of the Global Strategy, and agree that the Food and Agriculture Organization of the United Nations, under the auspices of the Friends of the Chair, prepare an implementation plan for approval at the forty-second session of the Commission.

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Report of the Friends of the Chair on Agricultural Statistics

I. Introduction

1. The purpose of the present report is to describe the progress made in developing the Global Strategy to Improve Agricultural and Rural Statistics (hereinafter referred to as the Global Strategy) as requested by the Statistical Commission at its fortieth session. It also summarizes the steps taken to receive input from a very large number of stakeholders to develop the Global Strategy and to seek their commitment to its implementation. The report concludes with recommendations for the implementation of the Global Strategy, which include establishing governance at the national level, taking steps to improve statistical capacity through the national strategies for the development of statistics, coordinating resources provided by donor organizations and supporting the national advocacy efforts to improve agricultural statistics. The Friends of the Chair on Agricultural Statistics seeks the Statistical Commission's endorsement of the report and its advice on the implementation process.

2. At its fortieth session, held in February 2009, the Commission:

(a) Stressed that agricultural and rural statistics were essential for policymaking and that strategic direction was needed to meet the increasing demand for information at both the international and country levels, especially in the light of the recent food crisis;

(b) Emphasized the important role of agricultural ministries and other institutions in the compilation of agricultural statistics, as well as the coordination role of national statistical offices and national statistical councils;

(c) Supported the development of a strategic plan based on the recommendations in the report presented to the Commission, which included: establishing a set of core data that countries will provide, integrating agriculture into the national statistical system and developing a sustainable statistical system through governance and statistical capacity-building;

(d) Recognized the important role of the Food and Agriculture Organization of the United Nations (FAO) as the specialized agency in this field, and welcomed its commitment and effort to involve ministries of agriculture through its governing bodies in the development of the Global Strategy and the implementation plan;

(e) Requested that a Friends of the Chair group be formed to coordinate the development of the Global Strategy for presentation to the Statistical Commission at its forty-first session.

3. Under the guidance of the Friends of the Chair, FAO and the World Bank prepared a first draft of the Global Strategy, which then became the subject of a series of meetings and conferences during 2009, the outcome resulting in revisions leading to the presentation of the report to the forty-first session of the Statistical Commission.

4. The main elements of the Global Strategy are:

(a) A conceptual framework, based on a thorough assessment of users' data needs, that broadens the scope and coverage of agricultural statistics to include aspects of fisheries, forestry and rural households and establishes the need for a

survey framework that provides a linkage between the farm as an economic unit, the household as a social unit and the land they occupy in the natural environment;

(b) National and international agreement on a minimum set of core data to be provided, because the data requirements identified in the conceptual framework exceed what any country can provide for the same point in time;

(c) The integration of agriculture into the national statistical system. The challenges presented in the conceptual framework point directly to the integration of agriculture into the national statistical system. The Global Strategy provides the framework for achieving integration, which includes the development of a master sample frame for agriculture, its use in an integrated survey system and the implementation of a data management system;

(d) The sustainability of agriculture statistics. Under the conceptual framework leading to the integration of agriculture into the national statistical system, good governance will be required to bring together the efforts of the different stakeholders, especially national statistical institutes and ministries of agriculture. While the Global Strategy provides a framework for integration, it leaves the responsibility for implementation up to each country, and suggests that this may be accomplished through the formation of national statistics councils;

(e) The Global Strategy concludes with a description of the challenges remaining and outlines the way forward through the development of an implementation plan.

5. The Commission is asked to note that the Global Strategy is a long-range plan whose implementation will need to be preceded by a review of the governance of the national statistical system, an assessment of statistical capacity requirements, and the securing of resources to carry forward the effort. This undertaking will require a concerted effort by national, international and donor organizations.

6. Section II of the present report summarizes the background and the events leading to the decision to develop a global strategy to improve agricultural statistics. The consultation efforts to make the development of the strategy as inclusive as possible of all stakeholders are also outlined. Section III provides a more in-depth review of the Global Strategy. Section IV provides a summary and a set of recommendations for the consideration of the Commission.

II. Background and summary of the consultation and drafting process

7. The serious concerns about the quality of agricultural and rural statistics were first discussed in February 2008, at a meeting of interested parties immediately following the thirty-ninth session of the Statistical Commission. In 2008, with input from numerous stakeholders, the World Bank prepared a paper entitled "Framework to develop a strategic plan to improve national and international agricultural statistics". That paper was the focus of an Expert Group meeting in Washington, D.C., in October 2008. The outcome of that meeting was the report on global initiatives to improve agricultural and rural statistics (E/CN.3/2009/3), presented to the Statistical Commission at its fortieth session.

8. At its fortieth session, the Statistical Commission endorsed the work carried out to date, supported the development of a global strategy and agreed with the creation of a Friends of the Chair group to steer the process, with FAO and the United Nations Statistics Division serving as secretariat. The Commission also stressed the importance of proper representation of countries from all regions and at different levels of development in the preparation of the strategy, and welcomed the participation of interested countries in the group to ensure ownership of the process.

9. The Friends of the Chair group, established immediately after the fortieth session of the Statistical Commission, has been led by Brazil (Eduardo Pereira Nunes) and includes Australia, Brazil, China, Cuba, Ethiopia, Italy, Morocco, the Philippines, the Russian Federation, Trinidad and Tobago, Uganda, the United States of America, FAO and the United Nations Statistics Division both as observer and serving as the secretariat, Eurostat (observer) and the World Bank (observer).

10. In 2009, under the auspices of the Friends of the Chair group, several specific meetings were organized. These meetings served two aims: to generate and receive further input on the Global Strategy and to obtain a commitment from the main stakeholders. The Global Strategy, available as a background document to the Statistical Commission at its current session, is the result of this wide consultation with national and international statistical organizations, as well as with agricultural ministries and other governmental organizations represented in FAO governing bodies. FAO took the initiative to also include the Strategy as a main item on the agendas of its biannual conference of November 2009 (which gathers Ministers of Agriculture from all member countries) and sessions of the Regional Commissions on Agricultural Statistics (National Directors of Agriculture Statistics). All of these discussions and consultations led to continuous improvement and refining of the Global Strategy.

11. An important first round of consultations among the network of statisticians was held immediately after the establishment of the Friends of the Chair group. A follow-up to these consultations was held during the Satellite Meeting on Agricultural Statistics in Maputo, back-to-back with the biannual conference of the International Statistical Institute (ISI). The ISI conference in Durban that followed provided additional opportunities to discuss the results of the Maputo meeting. Furthermore the review of agricultural statistics in the UNECE region explicitly recognized the importance of the enhancement of agricultural statistics in developing countries.

12. A satellite meeting on agricultural statistics was held in Maputo, on 13 and 14 August 2009 to review the draft Global Strategy. It was hosted by the National Statistics Institute of Mozambique and supported and sponsored by the African Development Bank, Eurostat, FAO, the Partnership in Statistics for Development in the 21st Century (Paris21), the United Nations Statistics Division, the United States Department of Agriculture and the World Bank. More than 200 senior experts from international organizations, national statistical institutes and ministries of agriculture attended the meeting. Funding agencies such as the Bill and Melinda Gates Foundation also showed their interest by sending delegates to the meeting to discuss possibilities and modalities for participating in this global initiative.

13. The meeting was entirely dedicated to and organized around the various chapters of the Global Strategy. The purpose of the satellite meeting was to seek

input from international organizations and national agencies involved in the production and analysis of agricultural statistics.

14. During the conference, participants reached a consensus on the purpose of the Global Strategy, that of providing a vision for national and international statistical systems to support decision-making in the twenty-first century. The participants endorsed the vision and principles proposed.

15. Some important conclusions and recommendations were reached at the meeting. Participants recognized the present weakness of food and agricultural statistics and the important role they play in meeting the needs of current and emerging policy analysis and the decision-making process. They supported the proposed approach of the Global Strategy to integrate agricultural statistics with other sectors of national statistical systems, the need to establish clear functions and ensure the effectiveness of coordination structures, and the need to mainstream statistics into national development plans with adequate budgets. Participants also emphasized the importance of halting, and reversing, the decline in capacity in developing countries and recommended the coordination and strengthening of capacity-building for agricultural statistics.

16. Regarding the detailed proposals included in the Global Strategy, the participants found that further refinements and developments were needed in the conceptual framework, the methodology for assessing national capacity in agriculture statistics, the defining of a minimum set of core data, the integrated survey framework and the master sampling frame. The meeting requested the Friends of the Chair group to work further in these areas and to revise the Global Strategy, using inputs from the Maputo meeting, by forming task teams to further review and provide input for the four areas identified above. The broad-based consultations resulted in a commitment being made by a large number of countries to actively contribute to the development of the Global Strategy. The four task teams, led by Australia, the Philippines, China and the United States, respectively, delivered their input by the end of October 2009. The Global Strategy presented to the Commission was prepared by FAO and the World Bank using the extensive input from all stakeholders and from the Friends of the Chair task teams.

17. The fifty-seventh session of ISI, held in Durban, South Africa (16-22 August 2009) included a wide variety of meetings at which papers that had been invited and contributed on topics involving agricultural and rural statistics, such as censuses of agriculture and survey methods, as well as economic and environmental accounting for agriculture, that were related to issues raised in the Global Strategy were discussed. These sessions were attended by an estimated 300 participants.

18. The Paris 21 Consortium meeting in Dakar (November 2009) provided another opportunity to further discuss the Global Strategy with a variety of stakeholders, donors in statistical cooperation, Governments, private business and intermediate organizations and statisticians. A luncheon seminar on the Global Strategy attracted around 100 participants and contributed significantly to the further recognition of its importance. The situation of agricultural statistics and the Global Strategy was also a recurrent point raised in many of the discussions at this three-day meeting and figured prominently in the statements made at the plenary final session of the conference.

19. Efforts to expand access to the development of the Global Strategy to all ministries of agriculture and national statistical offices included the development of a Wikipedia web page (wiki.asfoc.ibge.gov.br). This global consultation helped the Friends of the Chair group to improve the Strategy document and disseminate information on the initiative. It will also help in the preparation of a detailed implementation plan for the Global Strategy.

20. The intergovernmental process for the adoption of the Global Strategy, led by the Statistical Commission and primarily involving heads of national statistical offices, was complemented by a parallel intergovernmental process, guided by FAO governing bodies, and involved representatives of ministries of agriculture, given their important role in the compilation of agricultural statistics.

21. The FAO Statistics Division has been working closely with other international development partners, including the World Bank, the African Development Bank, Eurostat, Paris21 and the United Nations Statistics Division in the process of developing the Global Strategy. In this context, the FAO Statistics Division has also coordinated input from all FAO departments, carrying out substantial statistical work.

22. A seminar chaired by the Assistant Director-General and head of the FAO Economic and Social Development Department was organized on 23 June 2009 for the permanent representatives to FAO to discuss the Global Strategy. Permanent representatives at the meeting expressed their strong support for the initiative. Statistics is considered to be a fundamental and important area of work for FAO and, as such, is recognized as a core function in its programme of work and budget. A renewed initiative to improve agricultural statistics was also in line with other important initiatives of FAO, such as the Impact Focus Area on Capacity Building for Information and Statistics and the CountrySTAT project. Permanent representatives acknowledged the challenges for improving statistical capacity and recommended the increased use of technology in these endeavours. They supported the Global Strategy on establishing statistical councils as the coordinating bodies in countries, and enhancing international partnership with other international development agencies. Several areas of statistical data needed for policy analysis and policymaking were also addressed. The permanent representatives requested to be kept informed and related information on the development of the Global Strategy to be posted on the website.

23. The Global Strategy has further been presented at the following regional statistical meetings for consultation and endorsement:

(a) FAO Regional Office for Asia and the Pacific, Expert consultation on statistics in support of policies to empower small farmers, Bangkok, 8-11 September 2009;

(b) Twenty-first session of the FAO African Commission on Agricultural Statistics, Accra, 28-31 October 2009;

(c) FAO/Inter-American Institute for Cooperation on Agriculture, Working Group in Agricultural Statistics, Rio de Janeiro, Brazil, 10-12 November 2009.

24. The Global Strategy was one of the main agenda items of the thirty-sixth session of the FAO Conference (Rome, 18-23 November 2009). The Conference is the supreme governing body of FAO and meets in regular session once every two

years. Senior officials of the ministries of agriculture of all member nations and observers from non-member nations, intergovernmental organizations and non-governmental organizations attend the Conference to determine the policies of the Organization, approve the programme of work and budget and make recommendations to members and international organizations.

25. The Conference unanimously supported the Global Strategy. It appreciated the leading role played by FAO in agricultural statistics and the extensive consultation process undertaken to develop the Global Strategy, which involved development partners and developed and developing countries. The Conference recognized that the Global Strategy was essential for the improvement of agricultural and rural statistics and to meet the new and emerging demand in statistics for development policies in the twenty-first century. More specifically, in a statement made on its behalf, the European Community and its member States indicated that most of the Global Strategy components were already in place in the European System of Agricultural and Rural Statistics and that it anticipated playing an active role in the next steps of implementation of the Global Strategy, mainly in developing countries.

26. The Global Strategy was conceived as a follow-up to the findings and recommendations of the recent independent evaluation of FAO's role and work in statistics. The integration of agriculture into national statistical systems was considered a very important component of the Strategy. For this reason, the Conference stressed the need for close collaboration between ministries of agriculture and national statistics offices and noted with satisfaction that these two Government agencies in the countries involved had been associated with the formulation of the Global Strategy.

27. The Conference noted that after the Global Strategy was endorsed by the Statistical Commission in February 2010, at its forty-first session, an implementation plan would be developed during that year. It recommended that adequate resources be allocated to statistics programmes, at both national and international levels. In that regard, the Conference stressed that a multi-donor approach was necessary to implement the Global Strategy.

28. Section III below outlines the main components of the strategy to improve agricultural statistics, based on the extensive efforts described above to obtain input from stakeholders.

III. Structure of the Global Strategy

29. The Global Strategy is based on a thorough assessment of users' needs and the statistics currently available. This assessment revealed both a serious decline in the quantity and quality of agricultural statistics and the emergence of many new data requirements. A significant amount of the country data in the FAO database has been imputed; some 30 per cent of the countries last conducted an agricultural census for either the 1980 or 1990 rounds. These emerging data requirements include issues closely interlinked with agriculture, such as poverty and hunger, climate change, the use of land and water, and the increasing use of food/feed commodities to produce biofuels.

30. Given these emerging data requirements, a new conceptual framework was developed to define the dimensions, units, scope, coverage and boundaries of

agricultural production and activities. As a result, the conceptual framework brings aspects of forestry, fisheries and the use of land and water into the agricultural and rural framework, and calls for a linkage between agricultural holdings, the household, and the land they occupy and use. The conceptual framework provides the foundation for the Global Strategy and translates policy issues into statistical language.

31. The conceptual framework also refers to a menu of indicators and the respective underlying data required. This creates data requirements that exceed what most countries could provide at the same point in time. In order to meet the requirements identified in the conceptual framework, the Global Strategy is based on three pillars: agreement on a minimum set of core data that each country will provide, the integration of agriculture into the national statistical system, and the establishment of a sustainable statistical system through governance and statistical capacity-building.

32. The first pillar is the identification of a minimum set of core data that will provide national and international policymakers with the necessary information about issues of interest to countries and also issues that go beyond national boundaries. The minimum set of core data includes statistics on production for major items, trade, land cover and water use, the effect of agriculture on the environment and climate change, and the monitoring of efforts to reduce poverty. As indicated in the conceptual framework, these data requirements are not independent of each other. The Global Strategy provides a framework for countries to add items of national interest to the set of core data and to determine the frequency with which they will be provided. The set of core data is the starting point for the improvement of agricultural statistics.

33. The second pillar of the Global Strategy is the integration of agriculture into the national statistical system to meet the requirements for the scope and coverage of agricultural statistics and the linkage between farms, households and land. Integration facilitates the concentration of resources from different sources, reduces duplication of efforts to produce statistics, and provides a blueprint for the inclusion of agriculture into national strategies for the development of statistics. Integration will be achieved through: (a) the development of a master sample frame for agriculture; (b) the implementation of an integrated survey framework; and (c) the development of a data management system, as follows:

(a) The Global Strategy provides alternatives to develop the master sample frame. All are based on the fundamental principle that the statistical units include farms and households, and reflect their linkage to each other and to land use. The development of the master sample frame includes the requirement to geo-reference census and administrative information to satellite imagery mapping land cover and use. The underlying principle is that the master sample frame is the source for samples for all surveys of farms, farm households, rural non-farm households and land use surveys. The master sample frame facilitates the use of sample designs that allow data analysis across surveys. Once the master sample frame has been developed, it should be possible for different institutions in the national statistical system to access it for survey purposes;

(b) The integrated survey framework builds on the capabilities presented by the master sample frame and the set of core data and related data requirements. The survey framework includes the use of replicated sampling and rotating panels to

collect data annually for core items and at four-year intervals for other items, including farm structure and the use of inputs. The underlying principle is that the sample, survey and questionnaire designs provide the capability to link data across surveys and over time. The integrated survey framework also includes other data sources, especially administrative sources, in a comprehensive and integrated data collection and survey framework;

(c) The data management system provides three capabilities, starting with access to official statistics for dissemination purposes and integration with the FAOSTAT statistical database as a global public good. The other capabilities of the data management system include the storage and retrieval of survey results and access to farm, household and land use data for research and data analysis. The system builds on the capabilities provided by the master sample frame's linkage to land use and the provision of overlap between data collections by the integrated survey design. The data management system will provide analysis capabilities starting with the validation of survey data to data analysis across surveys and over time.

34. The third pillar is the sustainability of the statistical system. The implementation of these principles will require improved governance at the national level, with clear identification of roles and responsibilities for the national statistical office, the ministry of agriculture and other line ministries. As agricultural statistics in many countries are largely provided by the ministry of agriculture, the strategy recommends that each country establish a national statistical council to coordinate the development of the master sample frame, the establishment of the integrated survey framework, the implementation of a data management system and the inclusion of agriculture in the national strategy for the development of statistics. However, the strategy gives each country the responsibility for deciding on the specific institutional framework and the allocation of responsibilities among the various institutions.

35. Better coordination will also be needed among international organizations supporting statistical capacity-building and providing technical support to developing countries. The Global Strategy calls on donors to coordinate their efforts to improve agricultural and rural statistics and to establish a programme of statistical capacity-building on the identified set of methodological tools.

36. The Global Strategy concludes by providing an overview of the challenges remaining, and the steps towards an implementation plan. The greatest challenge is to improve countries' statistical capacity, which will be needed to properly implement the three pillars explained above. Another challenge is to address many of the unresolved methodological problems associated with agricultural surveys and, at the same time, to take advantage of technical developments.

37. The Global Strategy is a long-term effort that will be implemented in stages, according to the level of development of the statistical system of each country. Countries needing to reform their statistical system will begin with the minimum core data set and build the rest over time. The next group are those countries in the process of implementing their national strategies for the development of statistics. These national strategies need to be reviewed in the light of the Global Strategy and revised if necessary. The third group includes countries with developed statistical systems. However, many of these do not meet the integration requirement and will need to begin by developing a master sample frame for agriculture and an integrated database.

IV. Summary and recommendations

38. The Global Strategy will provide national and international agricultural statistical systems guidance on ways to meet policymaking and decision-making needs in the twenty-first century. The agreement reached on a minimum core data set, the integration of agriculture into the national statistical system and the adoption of common methodologies will improve the quality of the statistics provided. More importantly, this integration will provide stronger support for advocating the importance of agriculture, for mobilizing resources at the national and international levels and for rebuilding the statistical capacity of key data producers. An essential prerequisite for the implementation of the Strategy will be countries' support in establishing the appropriate governance mechanism and in providing adequate resources for agricultural statistics. The donor community should support this country-led process by providing the necessary financial and technical resources.

39. In order for the Global Strategy to meet expectations for improved capacity, better quality and greater quantity of agricultural and rural data for users, many countries, in particular developing countries, will require adequate technical and financial support to strengthen and upgrade their current system of agricultural statistics. Once approved, the Global Strategy should be immediately followed by a corresponding implementation plan with a comprehensive capacity-building programme. It is proposed that the plan be prepared in 2010 following the same broad-based consultation and review process by the national and international partners as was the case for the Global Strategy. Once finalized, the donor community is expected to provide the necessary financial and technical support to the implementation plan of the Global Strategy.

40. The implementation plan should provide for methodological areas requiring research and development. For example, in many situations, the estimation of crop yields still poses challenges. In addition, technology, such as the satellite imagery used for the master sample frame and early warning, Global Positioning Systems (GPS) and hand-held computers for data collection, needs to be developed for use in agriculture. The integrated survey framework calls for expertise in sample and survey design and the development of data warehouse technology.

41. The implementation plan should be based on case studies of countries showing: (a) the timing and frequency with which the core indicators have been provided in the past; (b) the last three time periods for which a census of agriculture was conducted; (c) whether that census was complete or partial, and its scope and coverage of small and subsistence households; (d) the respective responsibilities of the national statistical offices and ministries of agriculture; and (e) the status of the national strategies for the development of statistics.

42. The implementation plan should provide input on the depth of the problem, determine resources needed to develop the statistical system and outline the necessary steps to develop the master sample frame, the integrated survey framework and data management system.

43. The implementation plan should provide the framework for the involvement of donor and international organizations in the implementation of the Global Strategy.

44. FAO will lead the implementation of the Global Strategy in close partnership with international, regional and national agencies. Work is being initiated under the

FAO Impact Focus Area on Capacity Building in Information and Statistics and in close partnership with international and regional institutions.

45. The process of designing or revising the national strategy for the development of statistics in International Development Association countries should systematically be used to integrate and mainstream agriculture statistics into the national statistical system. FAO, Paris21 and other agencies should provide technical guidance to facilitate this integration and mainstreaming of agriculture into the national strategies. A bottom-up approach to the preparation of the national strategies and effective governance and coordination mechanisms within the agriculture and rural sectors and between those sectors and the rest of the national statistical system are key elements for proper integration and call for a country-by-country review of the status of national statistical systems.

46. The main directions of statistical capacity development include: (a) building the basic statistical infrastructure (frames, master samples, integrated survey framework, etc.); (b) providing education and training on new methodological tools and new technologies (GPS, remote sensing); (c) developing data analysis tools on methods of using data to answer policy questions; and (d) building a regional approach and partnerships for a sustainable statistical system.

47. In summary, after a broad-based consultative process involving all major stakeholders, there is a large consensus on the need for the Global Strategy, and on its technical content and direction. It is expected that the implementation of this Strategy will significantly improve the availability and increase the quality and quantity of agricultural rural statistics, and enhance the capacity of countries to produce data on a more sustainable basis. It is also recognized that there is a need to prepare a corresponding detailed implementation plan for the Global Strategy, to be agreed upon by all stakeholders and technically and financially supported by countries, the donor community and technical cooperation agencies at international and regional levels.

48. The next steps include:

(a) The development, in 2010, of an implementation plan for the Global Strategy (including a comprehensive capacity-building programme) to be widely reviewed and discussed with all stakeholders and presented at the Fifth International Conference on Agricultural Statistics in October 2010 in Kampala;

(b) The submission of the implementation plan to the Statistical Commission for comments and endorsement at its forty-second session, to be held in 2011; and

(c) The initiation by FAO, in partnership with other international and regional agencies and donor agencies, of the implementation of the Global Strategy in regions and countries where conditions are adequate.

49. The Commission is requested to:

(a) Comment on and endorse the Global Strategy;

(b) Direct FAO, under the auspices of the Friends of the Chair, to prepare the *implementation plan for the Global Strategy and submit it for the approval of the* Commission at its forty-second session.

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Wye Group on Statistics on Rural Development and Agriculture Household Income

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its fortieth session,** the Secretary-General has the honour to transmit the report of the Wye Group on Statistics on Rural Development and Agriculture Household Income, which is presented to the Commission for information. The Commission is requested to take note of the report.

* E/CN.3/2010/1.
** See *Official Records of the Economic and Social Council, 2009, Supplement No. 4* (E/2009/24), chap. I.A.

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Report of the Wye Group on Statistics on Rural Development and Agriculture Household Income

1. The Wye Group on Statistics on Rural Development and Agriculture Household Income was established by the United Nations Statistical Commission at its thirty-eighth session, held from 27 February to 2 March 2007, following the completion by the Intersecretariat Working Group on Agriculture and Rural Indicators (IWG.AGRI) of the Handbook entitled *Rural Households' Livelihood and Well-being. Statistics on Rural Development and Agriculture Household Income*.[1] The Group has been working over the last two years to update the Handbook, by expanding its scope beyond the current main focus on Organization for Economic Cooperation and Development (OECD) countries and providing a range of perspectives on the changing nature of agricultural activity and the type of data needed to understand and monitor these trends.

2. The Wye Group had its second annual meeting in Rome on 11 and 12 June 2009, to gather material and proposals for the Handbook update. Expected outcomes of the meeting were: to highlight emerging issues in rural statistics for countries at different levels of development; to share good practices and identify possible uses of new tools in rural statistics in countries at different stages of development; and to agree upon a workplan, a tentative table of contents and a set of relevant contributions for the Handbook update. The meeting was well attended, with over 60 participants coming from international organizations, national statistical offices or administrations and universities. In total, 14 different countries and 27 different organizations (several of which from developing countries) were represented.

3. The meeting in Rome was organized in three sessions: Session 1, Changing rural paradigm: emerging issues and data needs; Session 2, Innovation, new tools and results in rural statistics; and Session 3, Some issues in rural development and household income statistics for countries at different levels of development. Summaries of the papers are provided in the annex. The detailed agenda of the meeting and all documents are available on the website of the Food and Agriculture Organization of the United Nations (FAO) at http://www.fao.org/fileadmin/templates/ess/pages/rural/wye_city_group/2009/index.htm.

4. During the final session of the meeting, a consensus was reached that the update would be closely linked to the Global Strategy for Agricultural and Rural Statistics, being developed under the auspices of the Statistical Commission, and would comprise a revised Handbook and a supplement, especially focused towards non-OECD countries at different levels of development. It was also agreed that the first draft of the revision and supplement would be presented and discussed at the next Wye Group meeting, planned for May 2010 in Washington, D.C.

5. A Steering Committee of 16 members was established to guide the preparation of the update, with representatives from the organizers of the second Wye Group meeting, experts from academia, from developing countries (Brazil, China, India, Uganda) and from Eastern Europe. In addition, an editorial board was set up comprising FAO, the Economic Research Service (ERS), the World Bank and two editors, one for the revision and one for the supplement, respectively. The editors will be assisted by two research assistants to be recruited and supported by FAO.

[1] United Nations publication, Sales No. E.07.II.E.14.

6. Chapters to be updated, revised or newly drafted in both the revision and the supplement were identified. The supplement, in particular, would focus on policy issues concerning rural poverty and hunger, methods of clustering countries, assessment of data sources, analysis of case studies and good practices, and so forth. Further revisions would be discussed at the next Wye Group meeting in May 2010.

7. The World Bank offered to support both the revision and the supplement to the Handbook and to cover the editors' fees, requesting additional funds from the Global Strategy Trust Fund. The revision and the supplement would be published initially only in electronic format and hosted on the FAO website.

8. A detailed workplan for the preparation of the revision and the supplement was also agreed upon by the Steering Committee, with the following timetable:

- ERS/FAO to present a draft proposal linking the Wye Group work and the Global Strategy for Agricultural and Rural Statistics, by the end of August 2009
- Request for written confirmation of voluntary commitments to draft sections/chapters of the Handbook revision and supplement by the end of the summer 2009
- Submission of contributions to the editors by February 2010
- Review of the Handbook revision and supplement chapters at the Wye Group meeting in Washington, D.C., in May 2010
- Presentation of the final update to the Fifth International Conference on Agricultural Statistics, to be held in Kampala in October 2010.

9. As of November 2009, progress was made in the following areas:

- Outlines for the revision and supplement, respectively, were drafted and circulated.
- A call for a formal commitment to draft a chapter or a section of the updated manual was sent to prospective authors.
- Research assistants were selected and recruited by FAO to support the two editors.
- A draft proposal to ask for additional funds from the World Bank's Global Strategy Trust Fund was prepared.

10. The next Wye Group meeting is planned for May 2010 in Washington, D.C., and will be organized and hosted by the United States Department of Agriculture/Economic Research Service and the World Bank.

Annex

Summary of the sessions of the second meeting of the Wye Group on Statistics on Rural Development and Agriculture Household Income, held in Rome, on 11 and 12 June 2009

Plenary session 1: Changing rural paradigm: emerging issues and data needs

Overview

1. This session discussed the growing complexity of the relationship between agricultural endeavour and well-being in both Organization for Economic Cooperation and Development (OECD) and non-OECD countries. All of the papers by and large drew upon international comparisons to address issues related to changes in governance structure; the changing nature of traditional agricultural activity; and the changing allocation of labour across this traditional notion of agriculture and "non-agricultural" activities. A common theme was the need to reconsider the kinds of data needed to understand and monitor these trends both for research and policy implementation.

Papers and presentations

Rural areas definition for monitoring income policies: the Mediterranean case study, paper by Giancarlo Lutero and others

2. The authors examine the determinants of the large rural-urban differences in income levels across countries in the Mediterranean basin. An interesting feature of this spatial differentiation is that it occurs across areas that are geographically and often culturally similar. Rural-urban differences are identified consistently across countries, thus demonstrating the value of such territorial divisions for economic classifications and policy consideration.

3. Both authors and audience noted a number of key data needs that would allow a fuller accounting of international comparisons of well-being. The authors identified a number of important differences in the way data are collected as having potentially strong effects on the results of their analysis. Audience members discussed the extent to which the income differences were related to the density of agricultural activity, a metric not easily captured by available data.

Ownership, governance, and the measurement of income for farms and farm households: evidence from national surveys, paper by James Johnson and others

4. The traditional view of agricultural decision-making focused on the centrality of the single farm owner and associated household. A contemporary understanding acknowledges a far more complex view in which multiple owners, households, and other stakeholders share in both the decisions and the agricultural returns in ways not well captured by many farm surveys. The authors examine this changing governance structure in agriculture across the United States, Canada, the Netherlands and Italy, drawing from national surveys in each country. They document that the single owner/decision-making unit is still numerous in terms of share of farms owned, but contributes a small share of production.

Diversification and multifunctionality in Italy and the Netherlands: a comparative analysis, paper by Cristina Salvioni and others

5. In response to the crisis in the productivist model of agriculture, producers have increasingly diversified their economic activities, including those with strong ties to farming, those that are tied only by the use of a common resource, and those related to off-farm activity. To understand how contemporary producers are maintaining income and remaining part of the rural development fabric, the authors draw upon the classification of activities proposed by Van Der Ploeg and Roep, and use Dutch and Italian Farm Accountancy Data Network (FADN) data to examine and compare the diffusion of broadening, deepening and pluriactivity strategies in the two countries. Results show that farmers in both the Netherlands and Italy widely rely on the strategies examined, but that the mix and frequency of strategy utilization varies, partly owing to available information. Much of the discussion centred on the characterizations of the strategies, for example, whether pluriactivity was really an expansion of activity from farming to off-farm, but often (or perhaps, more often) occurred in the opposite direction.

Data sources and quality improvements for statistics on agricultural household incomes in 27 EU countries, paper by Berkeley Hill

6. Two paradigms that have driven agricultural data collection and analysis in the past — the centrality of agriculture in rural economic activity, and the dominance of the single-owner farm unity — have been fundamentally reconsidered in recent years. The author traces the efforts of European countries to recast their survey efforts in light of the changed realities and the challenges that have prevented full implementation of key initiatives. A critical role is played by the introduction of new member States into the European Union, many of which have quite different farm ownership structures, institutions, and employment activity.

Discussion

7. A common theme of the presentations was the significant limitations of current data to capture the emerging trends in agricultural management and household well-being identified in the session. For example, in the Lutero paper, a number of participants argued that wealth would be a stronger measure of long-term well-being than income, while acknowledging that data collection for wealth metrics is often inadequate. Even when the metric is correct, differences in the way data are gathered to produce indicators may prevent a full and accurate picture of international differences in economic processes. It was generally agreed, however, that a suboptimal measure is better than none at all.

8. There was also a general discussion about the challenge of collecting data that may be used to derive politically sensitive results. Statisticians serve the needs of policymakers, who are likely to be more sensitive to the conflict occasionally motivated by analysis; yet policymakers must also design and implement programmes and policies that reflect emerging reality.

Parallel session 1a: Different views of diversification and non-farm income

Overview

9. The main objective of this session was to discuss different results related to non-farm income and rural livelihood diversification. The papers highlighted different characteristics and causes to explain rural income patterns, especially when looking at India, where data show that female participation in rural non-farm activities has not increased, and Canada, where the increase of female labour participation in non-farm earnings is the main factor in explaining the decline in the household's agricultural earnings. The session also discussed data issues and methodological frameworks for refining the measurement of rural income. One paper also raised the issue of the importance of using sound statistical analysis and indicators in the decision-making process.

Papers and presentations

Rural livelihood diversification and its measurement issues: focus India, paper by Rajiv Mehta

10. The Wye Group framework postulates that single income from farm activities explains the incidence of deep poverty. The paper discusses the aspects of rural livelihood diversification, blending non-farm economic activities with farm activities as the development paradigm for improving the livelihood and well-being of rural households. The constraints owing to rural structural distinctiveness in terms of resource endowments and factors of production are highlighted, as well as policy options to overcome them, such as strengthening empowerment and ensuring security for enhancing opportunities of such livelihood diversification. The paper gives an extensive description of available data on the multiple dimensions of rural economic diversifications and of measurement issues in India.

Households associated with agricultural holdings: selected socio-economic dimensions, paper by Ray Bollman, Statistics Canada

11. Statistics Canada used its Agriculture-Population Linkage database over the period from 1971 to 2006 to assess and study the role of these two factors in the measured increase in off-farm income of households associated with census-farms. The study addressed the possible causes that can explain the increasing share over time of off-farm work by the owner and other family members reported by census-farm operators. Some of this increase has been due to a polarization of the structure of agricultural holdings — more larger holdings and more smaller holdings. An ancillary objective was to explain the way the Agriculture-Population Linkage is created and to enumerate the contribution of this database to agriculture and rural policy analysis.

Measuring socially and economically sustainable rural communities — a policy-based approach, paper by Pippa Gibson

12. The Department for Environment, Food and Rural Affairs of the United Kingdom has set a certain number of indicators to measure the policy objective of "socially and economically sustainable rural communities". The paper discusses the indicators chosen to evaluate this objective which are organized along two main

components; the first one looks at mainstream policy areas ranging from education and health to poverty and housing affordability. The second one focuses on productivity, supported by a range of indicators from earnings and employment to investment and enterprise.

Parallel session 1b: Developing improved rural and farm survey methodologies

Overview

13. This parallel session discussed two issues related to the collection and interpretation of statistics on rural development and household income. The first paper reported on the International Financial Reporting Standards (IFRS), a set of standards that prescribes methodologies for income measurement at the business level. The second paper reported the experiences in China to set up an integrated agriculture and rural statistical system. There was no direct relation between the two papers, but both provided very valuable material to update the Handbook.

Papers and presentations

Experience on the use of international financial reporting standards for the calculations of agricultural income, paper by Koen Boone

14. International Financial Reporting Standards are developed in the accounting profession to correctly measure income and assets in companies. Over 100 countries have adopted these standards, including the European Union and many developing countries. There is a convergence process with the United States accounting standards. International Accounting Standard 41 deals with some specific agricultural issues, like the valuation of biological assets. It introduced several breakthroughs in accounting standards, such as the concept of "fair value" for biological assets.

15. The paper reviews the implantation of IFRS standards in the Dutch FADN since 2001. It shows that the use of IFRS is feasible but that two issues have recently become the topic of a debate. One is the inclusion of changes in the value of breeding livestock in the income indicators (as prescribed under the fair value concept). This implies that income increases at the moment the prices of breeding livestock increase. The other issue is the depreciation of milk quotas: the abolition of milk quota would lead to much lower income levels, as the quotas have to be depreciated in the income statement.

16. The discussion revealed that IFRS are a useful tool to guide discussion on the measurement of income and wealth, also in statistics. The standards are potentially a very useful way to standardize income calculations within agriculture but also between agriculture and other sectors. It was recognized, however, that in many data collection schemes the measurement of income and wealth is based either on tax-related income concepts or the methodology for recognizing income is not made explicit at all.

Promoting an integrated agriculture and rural statistical system in China, paper by Yu Xinhua and Yan Fang

17. China is a large agricultural country with 930 million people (70 per cent of the population) living in rural areas. China is changing fast and the development of

the rural area and agriculture is of strategic importance for the sustainable development of the country. China's statistical system includes a full set of statistical indicators to reflect the situation and development of agriculture, rural areas and the rural population. It has three main components: agricultural statistics; rural statistics; and rural household statistics. The paper describes several efforts to improve the statistics system, especially on integrating rural and urban household surveying, improve agricultural production surveys with up-to-date technology, improved economic accounts and price data, improved coordination in the system and new tools for quality management.

18. The session agreed that the papers could provide the basis for extending and developing the Handbook. The IFRS paper could be reworked in a section at the beginning of part II to discuss measurement of income and wealth in more detail. The China paper would be a good basis for a box on best innovation practices in a large and fast developing country, in part I.

Plenary session 2: Innovation, new tools and results for rural data

Overview

19. This session discussed new technologies for rural and agricultural data. The papers fell into two categories: dissemination and collection. Papers looking at using new technologies to disseminate data were presented in the papers of George and others and Barcaroli and others. Papers examining the use of new technology for data collection, such as the use of remote sensing, were discussed in the paper of Smith and others and Global Positioning System (GPS) technology in the paper of Doumbia and others.

Papers and presentations

Agro-MAPS: Mapping subnational agricultural land-use statistics on a global scale, paper by Hubert George and others

20. Agro-MAPS is an interactive web-based information system on land use which was created specifically to support several key global applications requiring subnational statistical data on crop production, area harvested, and yields. The system allows users to query and browse interactively the geo-referenced statistical data in the form of maps and subsequently to download data and maps for a selected country or region of interest. The data can also be processed interactively on the Agro-MAPS website in order to display maps of locally and regionally important crops. Land-use applications relevant to rural development span a range of nationally to globally important issues, including food security and poverty, sustainable land management, climate change, as well as policy formulation and planning. The presentation also described the potential use of Agro-MAPS data for the development of selected land-use indicators and in the characterization of national and global land-use (farming) system maps.

21. During the discussion, the strength of the data was questioned, as imputed data give different accuracy to directly observed data. However, all data used in the project were already published and taken directly from each individual country as FAOSTAT data are not collected at the subnational level. The maps would be updated every 6 to 12 months.

Use of remote sensing in combination with statistical survey methods in the production of agricultural, land use and other statistics: current applications and future possibilities, paper by Jeffrey Smith and others

22. The benefits of remote sensing versus sample surveys were discussed, and whether the remote sensing system was operational enough to remove the need for surveys for core variables. Questions regarding the cost of remote sensing were also raised, and while remote sensing removed the administrative burden on farmers, there would be software costs. The groundtruthing element of the methodology could improve accuracy and reduce the need for individual surveys.

An assessment of the adoption and impact of improved rice varieties in smallholder rice production systems in Côte d'Ivoire, paper by Sékou Doumbia and others

23. The issue of improving yields by using irrigation, herbicides and fertilizer was raised. Then, relating to Smith's paper, the potential of using remote sensing to identify mixed cropping was discussed. It was suggested that if the fields were reasonably sized, the system could be used, though some crops with distinctive flowers/leaves would be more easily identified, and perhaps different rice varieties would be more difficult to distinguish. The question about the benefit of surveys over GPS to engage and involve farmers was also raised.

An open source approach to disseminate statistical data on the Web, paper by Giulio Barcaroli, Leonardo Tininini and others

24. The discussion began with a discussion of the users of the technology; as well as the Italian National Institute of Statistics (ISTAT) countries, such as Kosovo and Bosnia subscribed to the system. There was also discussion of the disclosure control needed for such a system, and whether users themselves should have access to the full dataset and apply their own disclosure rules or whether the system would control for disclosure issues before dissemination. Tininini confirmed that in the case of the ISTAT system, the latter methodology was adopted.

Parallel session 2a: Data collection

Papers and presentations

Statistical data and objectives: a suitable methodology for data collection, paper by Massimiliano Gallina

25. In the paper, a protocol was developed for selecting the best source for producing statistics in less than ideal situations. The idea behind this is that in most cases, no money is available for a complete new survey and therefore the statistics should be based on the best available (administrative) sources. A prioritization of sources was presented, ranging from official sources used by the Government to very partial data or no valid statistical data. During the discussion, it was argued that official sources of the Government also sometimes lack reliability and thus are not always preferred. A very crucial part of the protocol is a team of local experts that has to make the evaluation of the available sources. They should have local knowledge, a good understanding of agriculture and agricultural incomes and preferably background information about potential sources.

The changing nature of family farms in the U.S. and Europe: implications for data collection, paper by Mary Ahearn and others

26. Ahearn's paper discussed the changing structure of farms. In the past most farms were family farms with one operator that was also the owner. Now farms have diversified organizational structures, multiple operators that might own part of the farm or not and multiple owners. Next to that contract farming increases in importance. These developments have large consequences for the indicators used within a country. They are especially important when comparing countries while next to the issues discussed, large differences in structure of the agricultural farms might exist. This is illustrated by a comparison of Dutch, Italian and American data on the number of farms, farm size and pluriactivity. The authors advise the editors of the Handbook to develop an integrated conceptual framework for the two parts on rural areas and agricultural income that is able to take into account the changing structure of farms and households. This framework should be the base of future work on indicators. The editors agreed with the authors that an integrated framework would be welcome but very difficult to develop. They stated that originally they even wanted to develop two separate handbooks.

Parallel session 2b: Technologies for rural data

Papers and presentation

Is the Italian organic farming model inside rural development? A farm structure survey data analysis, paper by Giampaola Bellini Simona Ramberti

27. Analysis performed on farm structure survey data revealed good performances for organic farming in year 2005 in environmental and socio-economic area. In fact, they not only adopt more environmentally friendly agricultural practices — as the ones suggested by law — but they also seem to have positive effects on the socio-economic dimension, thus enhancing rural development as a whole.

28. From the statistical point of view, farm structure survey revealed to be a suitable data source of standardized environment and socio-economic variables, all linked to a single holdings, so that they are suitable for analysis with a multidimensional approach.

Measuring cultivation parcels with GPS: a statistical evidence, paper by Gabriele Palmegiani

29. The aim of the paper was to study the statistical relevance of measuring cultivation parcels with GPS, with respect to the traditional method using compass and meter. The procedures used for the study reached the following two main findings: the first is the Unconditional Inference result. On the statistical equivalency hand, only Garmin60 (GPS60) is found statistically equivalent to the traditional method. On the parcel estimates hand, the traditional method tends to produce larger parcels estimates with respect to all GPS measurements methods. The first finding is the Conditional Inference result. On the statistical equivalency hand, empirical p-values produce the same conclusion of the theoretical ones: only cultivation parcel estimates using Garmin60 are found statistically equivalent to the traditional method.

30. On the parcel estimates hand, nothing can be stated about the largeness of the cultivation parcels using the conditional approach, and then the unconditional inference result remains valid.

31. The paper concludes that because the GPS methods are globally cheaper than the traditional method using compass and meter, the use of GPS60 is strongly recommended to reduce the costs of the agricultural surveys.

Micro versus macro approach on agricultural income measurements for rural households in Italian official statistics: an application for Albania, paper by Domenico Ciacci and others

32. The paper focuses on available data, from micro and macro sources, concerning agricultural households' incomes in Italy and Albania. After a brief history of these statistics in the European Union, the Italian approach on income measurement was presented. It was shown that the same approach can be applied in countries, such as Albania, where there is limited availability of statistical data.

Conclusions of the paper

33. In the near future, it is necessary to extend agricultural households' income indicators in Italy at the regional level (Nomenclature of Territorial Units in Statistics level 2) by means of new data available. This further step will allow politicians to optimize territorial interventions targeted to the support of households' incomes, also through solidarity policies, and with a particular attention to the needs of rural population.

34. There should be also more attention to type "B" of agricultural households, that is a vulnerable group in constant growth. It is important to guide policies at territorial level, providing statistical information on services available, opportunities to seek additional income from inside and outside the farm activity, encouraging their members in working age to integrate with the territory and to develop concrete steps able to reach an integrated income.

35. The future evolution of the issues related to rural development and extension of field observation in rural areas, should allow to further refining the basic surveys, linking rural development and policy impact on agricultural households and rural areas present in the territory. Priority given to statistics on agricultural households' income by Eurostat and member States will be key in the future to make appropriate choices and interventions in support of those subjects (households) that should be protected and encouraged to integrate with the territory.

36. The situation of new member States in the process of harmonization, such as Albania, is very different. The analysis of poor households shows that the poorest population is rural, but the gap with the urban population is steadily declining. In short, the experience described is an example of application and export of the statistic methodology in other realities even with a limited availability of data.

Plenary session 3: Some issues in rural development and household income statistics for countries at different levels of development

Overview

37. The main objective of this plenary session was to discuss issues related to the collection and interpretation of statistics on rural development and household income in countries at different levels of development. The level of development of a country has an impact on how these statistics can be collected and their analysis and use in three main ways. First, the size of the rural sector both in terms of the number of people involved and the contribution of agriculture and agricultural related activities to the national economy is crucial. Secondly, the level of technology employed and the extent to which production activities are determined by the location in which they take place and the environment they operate in. Thirdly, the level of development has an important impact on how much countries have been able to invest in their statistical systems and hence in their capacity to collect, compile and use statistics on rural development and agricultural household income.

Session 3

38. Session 3 of the June 2009 meeting of the Wye Group illustrated a number of different aspects of these three issues and demonstrated the kinds of challenge that an update of the Handbook, focusing on the needs of low income countries, will face. There were four papers, one describing the problem of measuring and understanding rural poverty in a developing country — India; one illustrating the use of administrative records and registers to analyse longitudinal changes in agricultural households in Canada, and two focusing on multi-country studies. The papers and the discussion they generated, however, helped to make clearer the ways in which the Handbook is already relevant to all countries and where it may need to be extended and developed further.

Papers and presentations

Estimation of rural poverty: a discussion with reference to India, paper by Chatterjee Shankar

39. The paper reviews national data on rural poverty in India with reference to the 2004/2005 national sample survey. India has a long history of carrying out household surveys and the National Sample Survey Organization is one of the premier survey agencies worldwide. This history provides a long time series of poverty data for the different states and territories and the paper provides a summary of how rural poverty has changed over the past 30 years. While there has been substantial progress nationally, across states the picture is mixed, with some states making substantial progress, but others lagging behind. The paper describes a number of different poverty reduction programmes and also provides a number of case studies to illustrate how these have had an impact. It also argues that a better understanding of rural poverty and its many characteristics requires both qualitative as well as quantitative data.

Accounting for the diversity of rural income sources in developing countries: the experience of the RIGA project, paper by Ana Paula de la O Campos, Alberto Zezza and others

40. The paper addresses the issues and lessons learned by the FAO Rural Income-Generating Activities Project (RIGA) in both the construction of income aggregates for cross-country comparison, and the results derived from this exercise. Major issues regarding the estimation of income covered the categorization of suitable approaches for dealing with costs, and the importance of reporting taxes and deductions in surveys collecting income data. In terms of survey questionnaire design, issues such as the appropriate use of reference periods, the need for equivalence scales, and the consistency in units and coding were discussed. Finally, lessons learned derived from the RIGA cross-country analysis highlighted the diversification of rural income and identified various definitions of the agricultural household, to which the results of income analyses may be sensitive.

Farm families, rural and urban non-farm families and the incidence of low income in Canada, paper by David Culver and others

41. Canada has a rich source of family income data for farm, rural and urban families. Tax records provide both annual and longitudinal family income data for Canadian families. The taxation data is used to illustrate the complexities involved in comparing family income levels and measuring the incidence of low income. When the sample is restricted to only couple families, urban families had the highest median income. However, when all families and individuals were analysed, the median income of farm families was significantly higher than that of non-farm families. The frequency of low income can also change depending on the type of low-income measure used. Longitudinal farm family income data provides significant benefits over annual data by tracking the same family for more than one year. Longitudinal data is particularly important when examining the income of those families operating large and very large farms.

Gathering information on total household income within an "industry oriented" survey on agriculture: methodological issues and future perspectives, paper by Benedetto Rocchi

42. The paper argues for the inclusion of questions on total household income within agricultural surveys that use the holding or the farm as the unit of enumeration. The paper also illustrates how the links between farming activities and the overall income strategy of the household may be represented in a Social Accounting Matrix (SAM) framework. This kind of model provides a means of classifying production activities according to technical criteria and institutions according to socio-economic criteria. The identification of the group of agricultural households then results from combining an industry with a sector classification. The paper then argues that the proper level to survey (and to represent in models) this structural linkage is the production unit, which in agriculture is the holding or the farm.

Discussion and conclusions

43. There was a wide ranging discussion on the papers. It was agreed that many of the issues which were raised should be addressed in future editions or versions of

the Handbook, but that the basic conceptual framework is sound and applies to more or less all countries regardless of their level of development. The main concepts of income as determined by the Canberra Group seems to be both relevant and applicable in a wide range of different environments; what is required is a wider range of case studies and examples that illustrate how the concepts can be used and applied in different countries. There would also seem to be a need for more discussion of statistical methods and procedures, especially those that can be used effectively in less than ideal conditions.

44. There was also agreement that the papers could provide the basis for extending and developing the Handbook. Areas that could be covered include:

- The importance and use of longitudinal data for studying income and poverty dynamics
- Linking information from both quantitative and qualitative studies
- The need to develop an inventory of key concepts used in different countries, with examples where possible
- The question of whether to measure income or consumption as welfare indicators and the associated problems of dealing with concerns such as remittances, capital flows and changes in stocks
- The role of frameworks such as the Social Accounting matrix as an integrating device for bringing together data from different sources and for identifying data inconsistencies and gaps
- How to deal with own consumption of production within the farm household and associated problems of valuation.

Parallel session 3a: Measuring food security and food poverty

45. The papers in this session discuss various aspects of the measurement of poverty, food security and social exclusion. The three concepts can be observed in the same individual and there are also community and regional linkages. The three papers explore a range of measurement issues including the thresholds to identify the number or share of poor or food insecure people. Sibrian's presentation links the thresholds for poverty and minimum dietary energy requirements. Bienkunska's presentation covered the measurement and diagnosis of poverty and social exclusion in rural areas as related dilemmas. Polish Central Statistical Office surveys provide for consistent measurement of poverty annually and every few years multidimensional analysis. Bienkunska also differences according to whether income or consumption are used. An important factor for countries with a significant share of the population living on farms is whether the analysis covers monetary income only or includes natural consumption. Statistics on social exclusion are complex and the aim of the social cohesion survey is to collect information which would support a comprehensive evaluation of the quality of life of Poles and analysis of the relationship with poverty.

46. Aspects of each paper are relevant to the sections of the Handbook treating rural statistics. Policymakers have a keen interest in poverty measurement and poverty alleviation is a Millennium Development Goal. The methodological parts of the paper discuss concepts to be measured, statistical techniques, and thresholds for

poverty. The example for Poland formalizes measurement of social exclusion and discusses community indicators.

Papers and presentations

Indicators on undernourishment and critical food poverty at national and subnational levels, paper by Ricardo Sibrian

47. Indicators to measure food poverty and undernourishment are useful for understanding food insecurity at national level and within countries. The paper discussed two indicators: proportion of undernourishment and proportion of critical food poverty. Both indicators are based on nutritional underlying criteria and derived from food consumption and income data collected in national household surveys. Proportion of undernourishment is the Millennium Development Goal indicator number 1.9, which is based on the distribution of dietary energy consumption (DEC); the proportion of critical food poverty is an indicator that links undernourishment to food poverty, based on the distribution of income (INC). The link is the concept of minimum dietary energy requirement (MDER) used in the FAO methodology as the cut-off value in the distribution of dietary energy consumption for estimating undernourishment. The critical food poverty line for estimating the proportion of critical food poverty is the critical income corresponding to the cost of MDER, based on a balanced diet on energy-yielding nutrients accessible to low-income population groups. The macronutrient-balanced diet uses the recommendations of a Joint World Health Organization/FAO Expert Consultation on Diet, Nutrition and the Prevention of Chronic Diseases, held in Geneva in 2002, as its point of reference. Examples illustrate the results of both indicators for a sample of countries in different countries.

Poverty and social exclusion in the Polish rural areas: attempted diagnosis and measurement-related dilemmas, paper by Anna Bienkunska and Monika Borowska

48. The differences in the socio-economic development between the Polish urban and rural areas as well as among particular regions of the country have also been confirmed by poverty and social exclusion statistics. The methodological part of the paper describes the measurement methods used by Polish official statistics in the area of poverty and social exclusion, including evaluation of the basic sources of data. Some dilemmas concerning international comparison of poverty are discussed. The second part of the paper provides a concise diagnosis on poverty and selected aspects of social exclusion in Polish rural areas, with particular attention to poverty range measurement that includes various poverty lines. Over one third of the Polish population lives in rural areas and the Polish Central Statistical Office's surveys confirm that during the last few years one tenth of the inhabitants of these areas have been at risk of extreme poverty. In 2007, 10.5 per cent of people below the poverty line that measures the subsistence minimum (versus 4 per cent in towns). The highest rural poverty rates were noted among families without their own arms and living on social benefits other than retirement pay or pensions. Poverty also varies across regions and the socio-economic characteristics of Polish rural areas.

Measuring undernourishment: comparison analysis between parametric and non-parametric methods based on Burkina Faso agricultural survey, paper by Moussa Kabore, submitted but not presented

49. The paper compares the two principal methods used to measure food insecurity using data from food and agricultural survey of Burkina Faso in 2006. The parametric method estimates undernourishment by supposing that the food consumption follows a lognormal distribution. The non-parametric method estimates the proportion of undernourished people from individual data. The paper shows that the two methods converge based on the law of large numbers. The non-parametric method allows cross-analysis of household undernourishment status with other socio-economic variables and the ability to monitor the Millennium Development Goals at the subnational level.

Parallel session 3b: Towards a core set of indicators

Papers and presentations

Developing countries' perspective: selecting a core set of indicators for monitoring and evaluation in agriculture and rural development in less-than-ideal conditions and implications for countries statistical system, paper by Naman Keita and others

50. The main themes discussed in the recent report of the Global Donor Platform for Rural Development/FAO/World Bank entitled *Tracking results in agriculture and rural development in less-than-ideal conditions: a source book of indicators for monitoring and evaluation*, were summarized.

Composite indices for multidimensional development and poverty: an application to MDG indicators, paper by Matteo Mazziotta and others

51. The measurement of development or poverty as multidimensional phenomena is very difficult because there are many theoretical, methodological and empirical problems. The set of indicators gives complete information but the multidimensionality can complicate the reading and the analysis of the results. The possibility to have a unidimensional measure that summarizes the information — in order to make it immediately clear and interpretable — can simplify considerably both data analysis and reading of complex phenomena.

For this reason, we propose a new and alternative composite index (Mazziotta Pareto Index (MPI)) which, starting from a linear aggregation, introduces penalties for the countries or geographical areas with "unbalanced" values of the indicators.

As an example of application of MPI, we consider a set of indicators in order to measure the Millennium Development Goals and we present a comparison among Human Development Index methodology, Human Poverty Index methodology and MPI.

52. Most of the discussion related to the philosophy of various alternatives for selecting weights to generate a composite index. Even the use of market prices as weights in a composite price index is assuming that the price has a direct relationship to the value of the item. The authors referred the discussion back to the

note in their paper from A. Sen that argued for a transparent and inclusive democratic process to select these weights.

53. One suggestion for the paper by Keita and others was that the name of each indicator should define the variable (say, as a row in a table) and then another dimension of the table (say, as columns) should define the geographic grid in which the variable is to be reported (say, rural, urban, all areas).

Session 4: Way forward in order to supplement the Handbook

54. A paper by Hill and Karlsson entitled "Discussion on the Handbook — preview of the Handbook update" was presented. Based on the table of contents of the Handbook, the paper indicated which chapters and subchapters that needed to be revised or added. It was stressed that the Handbook, as it now stands, lacks analysis and suggestions of good practices as concerns developing countries. For this reason a whole new section need to be added to the Handbook, addressing the particular issues of developing countries. To that end, the paper discussed the problems facing the developing countries as concerns lack of basic data series and hence also basic indicators, as shown in the external review of the FAO Statistical System and the paper by FAO/World Bank entitled "Selecting a core set of indicators for monitoring and evaluation in agriculture and rural development in less-than-ideal conditions". This calls for, on the one hand, prudence in recommendations of data series and indicators and, on the other hand, assistance by international organizations and donor countries to focus on statistical capacity-building. As developing countries are far from being homogenous, it is necessary to deal with various clusters of countries having different degrees of economic development.

55. In the introduction to the session, the history of the Handbook was recalled as well as how work was organized and carried out. As for the revision and update of the Handbook, it was suggested that an editorial board would be set up. In addition to this board, the work would be carried out by engaging:

- Seconded staff (could be based in FAO or home countries) from national statistical organizations or other national agencies dealing with agriculture economics/statistics
- Interns from universities, preferably based with FAO
- Contributions by experts of the Wye Group in drafting/reviewing chapters, subchapters and case studies.

56. It was also stressed that the update had to be linked to the Global Strategy for Agriculture Statistics, which will contain recommendations concerning which core indicators, data series and methodologies to focus upon from a global perspective.

57. As for the timetable of the work of updating the Handbook, the following milestones were suggested:

- International Statistical Institute Satellite Meeting on Agricultural Statistics, to be held in Maputo, in August 2009, at which the Global Strategy will be presented. The work of the revision/update of the Handbook should be closely coordinated with the Global Strategy.

- Wye Group meeting in Washington, D.C. in April/May 2010, organized by ERS and the World Bank. This meeting would review the revised and updated sections (but in a non-edited form). This would imply that authors of chapters and subchapters would have to submit to the editor their contributions by February 2010.
- Final update to be presented to the Fifth International Conference on Agricultural Statistics, to be held in Kampala in October 2010.

58. Among the issues proposed to be included in the revision/update, the following can be mentioned:

- Policy issues concerning poverty and hunger
- Definition of clusters of countries
- More detailed review of data sources (for developing countries, rather the lack of basic data series)
- Methodologies, including new technology
- Inventories of rural development and household income for developing countries similar to that which was done for Economic Commission for Europe/OECD countries
- Case studies of good practices (China, India, Brazil, Canada, United Kingdom, United States, Italy and the Netherlands, based on papers presented to the meeting)
- Linkage to the Global Strategy
- Definition of all types of farms, family farms as well as non-family farms
- A data collection system that allows for a continuously changing farm and household structure.

59. As for the particular chapters to be revised and updated, the following was also suggested (in addition to those mentioned in the Hill/Karlsson paper):

Chapter II	Specific policy issues for developing countries
Chapter VI	Refers to suggestions of the Global Strategy. Include remote sensing and other innovation tools
Chapter VII	Should be revised to include core set of indicators and a menu of indicators as will be suggested by the Global Strategy and also listed in "Selecting a core set of indicators for monitoring and evaluation in agriculture and rural development in less-than-ideal conditions"
Chapter VIII	A unified framework for agriculture households in all countries irrespectively of stage of development. It should also discuss in more detail the complexity of farming whether it is family farming or non-family farming as well as on multifunctionality activities
Chapters IX-XIII	Revision, additions and updates for developing countries, in particular concerning vulnerability and risk for low-income countries, consumption indicators, gender perspective and housing policies for rural development.

Restricted meeting of the Steering Committee

60. The final session of the Wye Group meeting was a restricted working session of potential authors to the revised Handbook and supplement to decide upon the next steps and organization.

61. It was stated that ERS would take on the secretariat of the Wye Group and the coordination of the Steering Committee, as they will host the third Wye Group meeting in 2010, probably with the contribution of the National Agricultural Statistics Service.

62. It was agreed that a Steering Committee and an Editorial Board would be put in place for overseeing the work on the revised Handbook and supplement.

63. The **Editorial Board** will be formed by Berkeley Hill as Chief Editor and Editor for the revised Handbook; and Graham Eele as Editor for the Handbook's supplement.

64. As custodian of the Handbook, FAO will host both the revision and the supplement on its website.

65. The Handbook revision should start as soon as possible after the Steering Group agrees on the chapters that need to be revised and authors commit to draft given sections/chapters.

66. Actions and next steps include the following:

- FAO would send to ERS the tentative tables of contents with new topics for both the revised Handbook and supplement for further circulation to the Steering Committee.
- FAO would circulate the latest electronic version of the Handbook in MS-Word format (.doc) to the authors, once they are identified.
- FAO would draft and circulate the final report of the meeting by 10 July and circulate it to the Group for advice and comments before dissemination and report to the United Nations Statistical Commission.
- ERS will request written confirmations of voluntary commitments to draft sections/chapters of the Handbook revision or supplement by the third week of July.
- ERS would request the nomination of a focal point in each organization in the Steering Committee.
- ERS, in consultation with FAO/World Bank, will draft a proposal connecting the Wye Group work to the Global Strategy, a provisional workplan and budget to be circulated to the Steering Committee before its being presented at the ISI Satellite Meeting in Maputo in August 2009.